



PATENT

Serial No. 09/867,803

Attorney Docket No. 1005-006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Lawrence J. Choi et al.
Serial No. : 09/867,803
Filed : 31 May 2001
For : METHOD AND SYSTEM FOR CLUSTERING
OPTIMIZATION AND APPLICATIONS
Art Unit : 2177
Examiner : Khanh B. Pham

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Technology Center 2100

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 C.F.R. § 1.132

Sir:

I, Dr. Bo Honore, a citizen of Denmark and permanent resident of the United States,
whose full post office address is Department of Economics, Princeton University, Princeton, NJ
08544-1021, declare as follows under penalty of perjury:

1. I hold a Ph.D. degree in Economics the University of Chicago awarded in 1987.
2. I am currently a Professor of Economics at Princeton University.
3. I am the Director of the Gregory C. Chow Econometric Research Program at
Princeton University.

4. I have taught at Northwestern University, and have held Visiting Positions at the University of Chicago and the University of Copenhagen.
5. Since 1987, I have worked continually in the field of econometrics.
6. During my career, I have served on the editorial boards of *Econometrica*, *Journal of Econometrics*, *Review of Economic Studies*, *Econometric Theory*, and *Economic Letters*.
7. I am a Fellow of the Econometric Society.
8. I have reviewed U.S. Patent Application Serial No. 09/867,803.
9. I have reviewed U.S. Patent No. 6,633,882 (Fayyad).
10. Among the methods with which I was familiar prior to 31 May 2001, the filing date of Application Serial No. 09/867,803, were methods of the type recited in Fayyad.
11. I have reviewed the U.S. Patent Office Action dated 3 May 2004 relating to Application Serial No. 09/867,803 (the "Office Action"), which contains the following statement: "As per claims 1, 5, 6, Fayyad teaches ... for each observation from the plurality of observations, calculating a percent of proxy values for the plurality of variables that equals a mode of that observation's corresponding cluster's proxy values for the corresponding variables".
12. That statement in the Official Action is factually incorrect in view of the state of the econometrics art as of the filing date of Application Serial No. 09/867,803. One

skilled in the art would not find that “Fayyad teaches ... for each observation from the plurality of observations, calculating a percent of proxy values for the plurality of variables that equals a mode of that observation’s corresponding cluster’s proxy values for the corresponding variables”.

13. Rather, upon reviewing the entire specification of the 09/867,803 application, one skilled in the art would recognize that the term “mode” refers to the “value or item occurring most frequently in a series of observations or statistical data”. This is a well-known definition, and matches the definition provided in American Heritage College Dictionary, Third Edition.
14. The Office Action contains the following statement: “Regarding claims 1, 5, and 6, Fayyad teaches ... the number of database records in each cluster is the ‘mode of that observation’s corresponding cluster’s proxy value’”.
15. That statement in the Official Action is factually incorrect in view of the state of the econometrics art as of the filing date of Application Serial No. 09/867,803. One skilled in the art would not agree that “the number of database records in each cluster is the ‘mode of that observation’s corresponding cluster’s proxy value’”.
16. Rather, based on the well-known definition of “mode”, one skilled in the art would not find that Fayyad teaches a mode in any manner.
17. The Office Action contains the following statement: “Regarding claims 2, 7, 8,

Fayyad teaches ... estimating a purposeful probability”.

18. That statement in the Official Action is factually incorrect in view of the state of the econometrics art as of the filing date of Application Serial No. 09/867,803. One skilled in the art would recognize that phrase “purposeful probability” is defined in the current application at page 25, line 14 through page 26, line 1 of Application Serial No. 09/867,803. Specifically, “[f]or a question, k that has L_k possible answers, the probability (also known as “purposeful probability”) that answer value ℓ is selected by observations (e.g. survey respondents) in segment m is estimated by

$$\hat{P}_m(k, \ell) = \frac{N_m(k, \ell)}{N_m} (1 - \delta \langle L_k \rangle) + \delta \quad (2)$$

where

N_m = total number of observations in segment m

$N_m(k, \ell)$ = the number of observations in segment m that gives the ℓ -th answer to question k

$$\delta = \min \left\{ 0.02, \frac{1}{2L} \right\},$$

19. The Office Action contains the following statement: “Regarding claims 2, 7, 8, at Col. 22 lines 10-20 [sic] Fayyad teaches the probability for each possible value (i.e., ‘FullTime Sallary’ [sic], ‘FullTime Hourly’, ‘Contract’, ‘Part Time’) of a particular variable (i.e., ‘Employment Status’)”.

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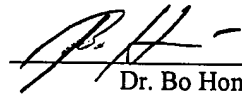
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20. In view of the state of the econometrics art as of the filing date of Application Serial No. 09/867,803, and based upon definition of "purposeful probability" provided in Serial No. 09/867,803, the alleged teaching of Fayyad at col. 22, lines 10-20, or anywhere else in Fayyad, does not show that Fayyad teaches "estimating a purposeful probability".

I further declare that all statements made herein of my own knowledge are true and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code and that willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed this 30th day of June 2004


Dr. Bo Honore